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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,970	05/23/2000	ROBERT W. FINBERG	DFN-025US	8077

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EXAMINER	
RUSSEL, JEFFREY E	
ART UNIT	**PAPER NUMBER**
1653	9

DATE MAILED: 01/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/486,970	Applicant(s) FINBERG ET AL.	
	Examiner Jeffrey E. Russel	Art Unit 1653	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondenc address --

Peri d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. Claims 5 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "analog" in claims 5 and 16 is indefinite because it is not defined either in the description or the art. It is not clear what degree of functional or structural similarity is necessary for one compound to be considered an analog of another compound.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-9 and 11-16 is rejected under 35 U.S.C. 102(b) as being anticipated by Higashijima et al. Higashijima et al teach methods and compositions for modulating the action of G proteins. Mastoparan analogs are used. See, e.g., the abstract and column 7, lines 1-20. With respect to claims 1-9, because the same active agent is being administered to the same subject by the same method steps, inherently septic shock will be prevented in Higashijima et al to the same extent claimed by Applicants. With respect to claims 11-16, a suggested use limitation does not impart novelty or non-obviousness to a composition claim where the composition is otherwise taught or suggested by the prior art.

4. Claims 1-9 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by the Cabeza-Arvelaiz et al article. The Cabeza-Arvelaiz et al article teaches the use of pertussis toxin and cholera toxin to inhibit the effects of LPS. The toxins antagonize LPS activation of G proteins. See, e.g., the Abstract; page 126, lines 12-17 and 24-31; page 128, Table 1; and page 133, lines 6-17. The toxins constitute analogs of mastoparan because of the toxins have the same

function and effect as mastoparan in treating or prevent septic shock, and because the claims do not set forth any structural limitations on what constitutes an analog of mastoparan. In view of the similarity in structure and function between the active agents of the Cabeza-Arvelaiz et al article and Applicants' specifically exemplified active agents, the active agents of the Cabeza-Arvelaiz et al article are deemed inherently to inhibit the interaction of G protein with CD14 to the same extent claimed by Applicants. Sufficient evidence of similarity is deemed to be present between the active agents of the Cabeza-Arvelaiz et al article and Applicants' claimed methods and compositions to shift the burden to provide evidence that their claimed invention is unobviously different than the Cabeza-Arvelaiz et al article.

5. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being obvious over the Cabeza-Arvelaiz et al article. Application of the Cabeza-Arvelaiz et al article is the same as in the above rejection of claims 1-9 and 11-16. The Cabeza-Arvelaiz et al article teaches that antibiotic treatment is a current therapy for LPS-induced shock, but does not teach the combination of an antibiotic with the toxin. It would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made to use a combination of the antibiotic and toxin taught by the Cabeza-Arvelaiz et al article to treat gram negative bacteria infection because it is prima facie obvious to use a combination of treatments where each treatment has been used individually to treat the same disease and where there is no indication of negative interaction between the treating agents.

6. Applicant's arguments filed January 3, 2002 have been fully considered but they are not persuasive.

The rejection under 35 U.S.C. 112, second paragraph, is maintained. Applicants contend that "analog" is a well-known and widely used term which refers to compounds which are "structurally similar to a particular compound, and have the same or substantially the same activity as the compound, but differ slightly in composition". The examiner agrees that "analog" is a well-known and widely used term, but does not agree that there is any fixed or accepted definition of the term. For example, Donahoe et al at column 8, lines 3-5, requires only that an analog of a molecule have the same or substantially similar function as either the entire molecule or a fragment thereof. There is no mention of a requirement that an analog must have a similar structure or only a slightly different composition. Alstyne et al at column 30, lines 22-25, defines a peptide analog as comprising amino acid insertions, deletions, substitutions or modifications at one or more sites in a peptide chain. No limit is specified as to the number of sites which can be modified, and no mention is made of a requirement for a similar structure or composition. Where multiple conflicting definitions of a term are present in the art, and where Applicants have not indicated in the specification which definition is being used, the claims are indefinite.

The rejections based upon Bertics et al and the Proctor et al article as the primary references are withdrawn. In view of the disclosed mechanism of action for the active agents of Bertics et al and the Proctor et al article, and in view of the lack of similarity in structure between the active agents of Bertics et al and the Proctor et al article and Applicants' specifically

exemplified agents, there is no reasonable expectation that the active agents of Bertics et al or of the Proctor et al article would possess the function required in the amended claims, i.e. that they would inhibit the interaction of a G protein with CD14, and there is insufficient evidence of similarity to establish prima facie anticipation.

The rejection based upon Higashijima et al is maintained. Applicants contend at page 10 of their response that the reference does not teach or suggest the treatment of septic shock (see especially lines 11, 13, 17, 26, and 28). The examiner agrees. However, the method claims are not limited to the treatment of septic shock, but embrace in the alternative the prevention of septic shock, and it is this aspect of the method claims to which the rejection is directed. Further, Applicants did not provide any argument as to why the composition claims would also be patentable over Higashijima et al. As Applicants are aware, an intended use limitation does not impart patentability to a composition claim which is otherwise anticipated by the prior art.

The rejections based upon the Cabeza-Arvelaiz et al article are maintained. Applicants argue that the toxins of the reference are not mastoparan analogs because they are not structurally similar to mastoparan. However, as noted above with respect to the rejection under 35 U.S.C. 112, second paragraph, it is not clear that Applicants' claim terminology "analog" carries with it a requirement for structural similarity. During examination, pending claims are given their broadest reasonable interpretation consistent with the specification (see MPEP 2111). When not defined by Applicant in the specification, the words of a claim are read as they would be interpreted by those of ordinary skill in the art (see MPEP 2111.01). Because Applicants did not provide a

definition of "analog" in the specification, it is reasonable to interpret "analog" using definitions provided in the patent literature, e.g., in Donahoe et al and Alstyne et al. In any event, Applicants' arguments address only claims 5 and 16, i.e. whether or not the toxins of the Cabeza-Arvelaiz et al article are mastoparan analogs. Applicants' arguments do not address the anticipation rejection of the other claims, which are not limited to mastoparan or mastoparan analogs. With respect to the obviousness rejection based upon the Cabeza-Arvelaiz et al article, the Cabeza-Arvelaiz et al article at page 126, lines 15-17, states that antibiotic treatment has been effective in vivo. This disclosure does not teach away from its use in combination with other modes of treatment.

Instant claims 1-17 are deemed to be entitled under 35 U.S.C. 119(e) to the benefit of the filing date of provisional application 60/057,941 because the provisional application, under the test of 35 U.S.C. 112, first paragraph, discloses the instant claimed invention. In view of Applicants' statement that the Solomon et al abstract was published on September 16, 1997, it is therefore no longer prior art against the instant claims.

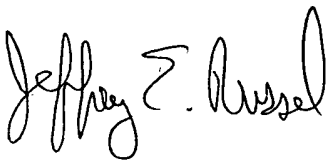
7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey E. Russel at telephone number (703) 308-3975. The examiner can normally be reached on Monday-Thursday from 8:30 A.M. to 6:00 P.M. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Christopher Low can be reached at (703) 308-2923. The fax number for Art Unit 1653 for formal communications is (703) 305-3014; for informal communications such as proposed amendments, the fax number (703) 305-7401 can be used. The telephone number for the Technology Center 1 receptionist is (703) 308-0196.



Jeffrey E. Russel

Primary Patent Examiner

Art Unit 1653

JRussel

January 26, 2002